

Application Serial No. 10/786,790
Reply to Final Office Action of March 25, 2008

PATENT
Docket: CU-3608

REMARKS

In the Final Office Action dated March 25, 2008, Claims 5 and 22-27 are rejected. By the present response, applicant responds to the grounds for rejection and provides affirmative arguments that it believes overcome the basis of rejection.

Claims 5 and 22-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over EP 0,932,081 (" '081 ") in view of JP 2000-053421 (" '421 "). Specifically, the rejection states that the '421 reference teaches a neutral sol solution of titanium oxide and the '081 reference patent teaches a composition comprising titanium oxide and flouroalkylsilane. The rejection further states that a person skilled in the art would be motivated to improve dispersibility of the titanium oxide contained in the composition of the '081 reference and, as such, it would be obvious for a person skilled in the art to attempt to add the titanium oxide sol taught in the '421 reference to the composition of the '081 reference.

The applicant believes that such a basis for rejection is incorrect for the following reasons: The rejection suggests that it would be obvious for a person skilled in the art to add the titanium oxide sol of the '421 reference to the composition of the '081 reference with a motivation to improve the dispersibility of titanium oxide contained in the composition of the '081 reference. However, the two cited references do not combine to achieve the desired result; the reason why titanium oxide has excellent dispersibility in the titanium oxide sol of '421 reference is because alkyl silicate stabilizes the dispersibility of titanium oxide during the hydrolyzation process. Thus, even if the titanium oxide sol, where the alkyl silicate is contained as a hydrolyzed state, is added to the composition of '081 reference, the dispersibility of titanium oxide could not be improved because alkyl silicate is hydrolyzed prior to its addition to the composition. Adding alkyl silicate that is already hydrolyzed would not improve the dispersibility of the '081 reference and thus a person having skill in the art would not be motivated to combine the '081 and '421 references.

Further, a person having skill in the art would not be motivated to combine the '081 and '421 references because of issues surrounding the pH of the '081

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reference. Although the exact pH of the composition taught by '081 reference is unknown, the addition of a composition having either a neutral pH or an acidic or alkaline pH would negate any motivation. Should the composition be neutral, the dispersibility of titanium oxide would not be improved even if the titanium oxide sol of '421 reference is added thereto. This would also be disadvantageous because the sensitivity of a wettability-variable layer to be formed with the composition would be lowered by adding a third component of alkyl silicate. Conversely, should the composition be acidic or alkaline, the dispersibility of titanium oxide contained in the titanium oxide sol to be added would deteriorate, negating any benefit. Both of these occurrences would be obvious to one having skill in the art and would negate the motivation to combine the cited references.

As explained, it would be apparent for a person having skill in the art to foresee the impossibility of improving the dispersibility of titanium oxide when the titanium oxide sol of the '421 reference is mixed into the composition of the '081 reference. In fact, a person having ordinary skill in the art would foresee that such a combination would adversely deteriorate the dispersibility of titanium oxide. Accordingly, no motivation would exist for such a combination of references and, as such, a rejection of Claims 5 and 22-27 based on 35 U.S.C. § 103(a) is inappropriate.

In light of the foregoing response, all the outstanding rejections are considered overcome. Applicant respectfully submits that this application should now be in condition for allowance and respectfully requests favorable consideration.

Respectfully submitted,

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Date


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